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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,137	03/29/2006	Bartel Marinus Van De Sluis	US030370	7745
24737	7590	01/09/2008	EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/574,137	VAN DE SLUIS ET AL.	
	Examiner	Art Unit	
	Gregory A. DiStefano	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 29 March 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 March 2006 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/29/2006</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the application filed 3/29/2006.
2. Claims 1-24 have been submitted for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4-8, 10-13, 16-19, and 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Wilson et al. (US 2004/0193413), hereinafter Wilson.
4. As per claims 1, 12, 23 and 24, Wilson teaches the following:

a display surface (108, 300) for displaying content to a user, (pg. 5, paragraph [0060]), i.e. the system comprises a computer 200 with a traditional keyboard 202, input pointing device 204, microphone 206, and display 208;

a computer system (110) for supplying the content to the display surface (108) for display in a content window (112, 306) on the display surface (108, 300), (pg. 5, paragraph [0060]), i.e. the system comprises a computer 200 with a traditional keyboard 202, input pointing device 204, microphone 206, and display 208, (pg. 8, paragraph

[0083]), i.e. typical GUI windows 712, 714, and 716 are displayed in a layered presentation in an upper portion of display 718; and

a recognition system (128) for recognizing a gesture of a user and defining at least one of a size, location, and content of the content window (112, 306) on the display surface (108) based on the recognized gesture, (pg. 8, paragraph [0088]), i.e. Fig. 7 illustrates the embodiment where a single hand shaped icon 720 is used, and the corresponding command recognized by the system is displayed below the icon 720. For example, when the system recognizes, either by virtue of gestures (with hand and/or object) and or verbal commands, the command to move a window, the icon 720 and corresponding command word “MOVE” are displayed by the display 718.

5. Regarding claims 4 and 16, Wilson teaches the method of claims 1 and 12 as described above. Wilson further teaches the following:

one or more sensors operatively connected to the computer system (110), (pg. 5, paragraph [0060]), i.e. video cameras 210 and microphone 206 are also operably connected to computer 200;

a processor (114) for analyzing data from the one or more sensors to recognize the gesture of the user, (pg. 5, paragraph [0060]), i.e. the hand gestures and/or object(s) appear in video images created by the video cameras 210 and are interpreted by the software 214 as commands to be executed by computer 200.

The examiner would like to make further note of Wilson’s teaching on pg. 4, paragraph [0051], where Wilson directly states that a “component” or “system” may be

interpreted to be a process running on a processor or a processor.

6. Regarding claims 5 and 17, Wilson teaches the method of claims 4 and 16 as described above. Wilson further teaches the following:

the one or more sensors comprise one or more cameras (130), (pg. 5, paragraph [0060]), i.e. video cameras 210 and microphone 206 are also operably connected to computer 200;

wherein the processor analyzes image data from the one or more cameras (130) to recognize the gesture of the user, (pg. 5, paragraph [0060]), i.e. the hand gestures and/or object(s) appear in video images created by the video cameras 210 and are interpreted by the software 214 as commands to be executed by computer 200.

7. Regarding claims 6 and 18, Wilson teaches the display of claims 4 and 16 as described above. Wilson further teaches the following:

the recognition system (128) further comprises a memory (116) for storing predetermined gestures and an associated size and/or position of the content window (112, 306), wherein the processor (114) further compares the recognized gesture of the user to the predetermined gestures and renders the content window (112) in the associated size and/or position, (pg. 10, paragraph [0102]), i.e. in the "Record and Define Gesture" mode, the system records hand gestures performed by the user. The recorded gestures are then stored in the system memory to be recognized during normal operation. The given hand gestures are then associated with a particular

command to be performed by the system in response to that particular hand gesture, (pg. 8, paragraph [0088]), i.e. Fig. 7 illustrates the embodiment where a single hand shaped icon 720 is used, and the corresponding command recognized by the system is displayed below the icon 720. For example, when the system recognizes, either by virtue of gestures (with hand and/or object) and or verbal commands, the command to move a window, the icon 720 and corresponding command word “MOVE” are displayed by the display 718.

8. Regarding claims 7 and 19, Wilson teaches the display of claims 6 and 18 as described above. Wilson further teaches the following:

the memory (116) further includes an associated content, wherein the processor (114) further compares the recognized gesture of the user to the predetermined gestures and renders the associated content in the content window, (112, 306), (pg. 8, paragraph [0086]), i.e. here, the same hand icon 720 is displayed in accordance with four different hand gestures utilized to indicate four different commands: Move, Close, Raise, and Scroll.

The examiner interprets Wilson’s teaching of “scrolling” the content of a window to encompass applicant’s limitation of rendering associated content.

9. Regarding claim 8, Wilson teaches the display of claim 6 as described above. Wilson further teaches the following:

wherein the processor (114) and memory (116) are contained in the computer system (110). As Wilson teaches in pg. 4, paragraph [0051], a "component" and "system" may be interpreted to be a process running on a processor and a "component" may be localized in one computer. Furthermore, as Wilson teaches in pg. 10, paragraph [0102] that hand gestures are stored in a system memory, it would have been clear that the memory and processor may exist within the computer system.

10. Regarding claims 10 and 21, Wilson teaches the method of claims 1 and 12 as described above. Wilson further teaches the following:

the gesture further defines a closing of an application displayed on the display surface (108, 300), (pg. 8, paragraph [0086]), i.e. here, the same hand icon 720 is displayed in accordance with four different hand gestures utilized to indicate four different commands: Move, Close, Raise, and Scroll.

11. Regarding claims 11 and 22, Wilson teaches the method of claims 1 and 12 as described above. Wilson further teaches the following:

one of a touch-screen, close-touch, and touchless system (122, 124, 126) for entering a command into the computer system, (abstract), i.e. a 3-D imaging system for recognition and interpretation of gestures to control a computer.

The examiner interprets Wilson's method of "recognizing and interpreting gestures" to be that of a "touchless" system.

The examiner would like to further note Wilson's teaching on pg. 4, paragraph [0057] where Wilson explicitly teaches that their system may receive input via a touch screen.

12. Regarding claim 13, Wilson teaches the method of claim 12 as described above. Wilson further teaches the following:

the gesture is a hand gesture, (pg. 8, paragraph [0088]), i.e. Fig. 7 illustrates the embodiment where a single hand shaped icon 720 is used, and the corresponding command recognized by the system is displayed below the icon 720. For example, when the system recognizes, either by virtue of gestures (with hand and/or object) and or verbal commands, the command to move a window, the icon 720 and corresponding command word "MOVE" are displayed by the display 718.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 2, 3, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson as applied to claims 1 and 12 as described above, in view of Taguchi (US 5,793,367).

15. Regarding claims 2 and 15, Wilson teaches the method of claims 1 and 12 as described above. However, Wilson does not explicitly teach a method where the display is a display mirror. Taguchi teaches the following:

the display is a display mirror for reflecting an image of the user at least when the content is not being displayed, (column 3, lines 37-39), i.e. in an embodiment of the present invention, a moving image photographed by a camera is displayed on a window in an image display window system as a dedicated window for controlling the camera.
The examiner interprets Taguchi's method of displaying what a camera is photographing to encompass applicant's limitation of "a display mirror".

Moreover, as admitted by Applicant in the Specification of the present invention (see Page 1, Lines 6-9), the prior art discloses a *display mirror for reflecting an image of the user at least when the content is not being displayed* in that a mirror may also include a content window that displays information on a particular part of the mirror.

It would have been obvious to one of ordinary skill in the art to have modified the gesture based control method of Wilson with the moving image display of Taguchi. One skilled in the art would have been motivated to have made such modifications because Wilson is directed towards a method of controlling a graphical user interface, in particular, a window based interface (see pg. 1, paragraph [0007]). Wilson does not limit the content of the windows in the interface and purely discusses a control method of the windows. Taguchi teaches of a method of displaying, in a window, a moving image of data picked up by an image pickup device (see abstract). Therefore, it would

have been obvious to have modified one of the windows of Wilson's graphical interface to be that of the picked up moving image of Taguchi. Further motivation for such modifications may be found in the similar architecture of the two systems. As may be seen in Taguchi's showing of Fig. 2, their system includes a computer system 30, a display 32, and a motion camera 40. Wilson has a similar system as may bee seen in their showing of Fig. 2, where their system includes a computer 200, a display 208, and motion cameras 210. Thus Wilson's system possesses all of the hardware necessary to support the display method of Taguchi.

With respect to applicant's limitation of displaying the mirror reflection image when at least the content is not being displayed or only displaying the content, these limitations are encompassed by Wilson's teaching of "maximizing" a window (see pg. 10, paragraph [0098]). As was well known in the art, upon a window becoming "maximized", that window encompasses substantially the entire display area, hiding other content windows. Therefore, upon a user of the modified system of Wilson "maximizing" the window containing the mirror image of Taguchi, that mirror image window would essentially encompass substantially the entire display, therefor hiding the content windows. Furthermore, upon a user of the modified system of Wilson "maximizing" a content window other than the one containing the mirror image of Taguchi, that content window would essentially encompass substantially the entire display, therefor hiding the mirror window.

16. Regarding claims 3 and 14, modified Wilson teaches the method of claims 2 and 12 as described above. Wilson further teaches the following:

the display mirror displays both the content and the image of the user, (pg. 8, paragraph [0083]), i.e. typical GUI windows 712, 714, and 716 are displayed.

This teaching of Wilson encompasses applicant's limitation of displaying an image of the user and the content in that as Wilson teaches that multiple windows are displayed, the modified system of Wilson in view of Taguchi may have the mirror image of Taguchi in one window and other content in another, thus displaying both a mirror image and a content window.

Moreover, as admitted by Applicant in the Specification of the present invention (see Page 1, Lines 6-9), the prior art discloses a *display mirror [that] displays both the content and the image of the user* in that a mirror may also include a content window that displays information on a particular part of the mirror. Thus, while the content window displays information, other portions of the mirror displays reflections of a user.

17. Claims 9 and 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson as applied to claims 1, 4, and 12 as described above, in view of Sun (US 6,643,721).

18. Regarding claims 9 and 20, Wilson teaches the method of claims 1 and 12 as described above. However, Wilson does not explicitly teach a method where a speech command renders content in the window. Sun teaches the following:

a speech recognition system (132) for recognizing a speech command of the user and rendering a content in the content window (112, 306) based on the recognized speech command, (column 8, lines 8-10), Fig. 5b shows the same graphical interface element as Fig. 5a, as it appears when the primary input device is a voice recognition input, (column 8, lines 13-16), i.e. the appearance resources adapt to the new primary input device by assigning a simple letter name to the scrollbar (Scroll A), and providing other word cues for possible user commands (Top, Bottom, Up, Down).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the "scrolling" method of Wilson with verbal commands of Sun. One skilled in the art would have been motivated to have made such modifications because both Wilson and Sun are analogous art in the field of controlling windows based graphical user interfaces using gestures and voice commands. Furthermore, Wilson directly teaches in pg. 8, paragraph [0085] that "a Scroll command may be initiated first by voicing a corresponding command that is processed by speech recognition" thus showing the desire to involve verbal commands with the scrolling process.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Freeman (US 5,454,043), dynamic and static hand gesture recognition through low-level image analysis.
- Sagawa et al. (US 5,734,923), apparatus for interactively editing and outputting sign language information using graphical user interface.
- Reichlen (US 6,061,064), system and method for providing and using a computer user interface with a view space having discrete portions.
- Nguyen (US 6,072,494), method and apparatus for real-time gesture recognition.
- Cox et al. (US 6,154,723), virtual reality 3D interface system for data creating, viewing and editing.
- Kumar et al. (US 6,222,465), gesture-based computer interface.
- Bradski (US 6,394,557), method and apparatus for tracking an object using a continuously adapting mean shift.
- Cohen et al. (US 6,681,031), gesture-controlled interface for self-service machines and other applications.
- Pryor et al. (US 6,720,949), man machine interfaces and applications.
- Bermudez et al. (US 6,895,589), manager component for managing input from existing serial devices and added serial and non-serial devices in a similar manner.

-Wilson (US 6,990,639), system and process for controlling electronic components in a ubiquitous computing environment using multimodal integration.

-Krahnstoever et al. (US 6,996,460), method and apparatus for providing virtual touch interaction in the drive-thru.

-Inagaki et al. (US 7,046,232), information processing apparatus, method of displaying movement recognizable standby state, method of showing recognizable movement, method of displaying movement recognizing process, and program storage medium.

-Mattsson (US 2003/0076293), gesture recognition system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory A. DiStefano whose telephone number is (571)270-1644. The examiner can normally be reached on 7:30am-5:00pm Mon.-Thurs...

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on (571)272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GAD
1/4/2008

Doug Hutton
Doug Hutton
Supervisory Primary Examiner
Technology Center 2100